In the present work we study properties and relations between convex functions and their generalizations. We commence with definition of convex functions and we get to differentiability and searching for extreme points through basic properties as continuity.We continue with quasiconvex, explicitly quasiconvex and pseudoconvex functions. Through their definitions and basic properties we get to relations between them and convex functions. We can find even theorems about composition of these generalizations here, which enable us easier to find, whether given composite function is (explicitly) quasiconvex or pseudoconvex. This work also contains a section dedicated to minimalization of these generalizations. There are mentioned some other generalizations of convexity at the conclusion of this work, which aren't analyzed so much.